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Investigation of psychological impact levels of the COVID-19 pandemic on people with and without psychiatric disease diagnosis

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Abstract

This study aimed to investigate the anxiety, depression, and psychological impact levels among people with and without psychiatric disease diagnosis in the quarantine and social isolation periods of the 2019 coronavirus disease (COVID-19) pandemic. This study using the case-control research technique, included 182 cases with psychiatric diagnosis and 183 control participants without a psychiatric diagnosis. The research used the Hamilton Anxiety Rating Scale (HAM-A), Hamilton Depression Rating Scale (HAM-D), Impact of Event Scale-Revised (IES-R), and a data form inquiring about sociodemographic characteristics. Data were collected from participants during face-to-face psychiatric interviews. The anxiety levels (OR: 6), depression levels (OR: 3.8), and psychological impact levels (OR: 5.8) were identified to be higher in the case group compared to the control group ($p < 0.05$). The HAM-A, HAM-D, and IES-R scores were not affected by age, sex, marital status, education, place of residence, and employment status in the study group. Living alone, receiving treatment, presence of chronic disease, poor income, and COVID (+) relatives affected scores. In this study, those with a psychiatric diagnosis were affected more by the COVID-19 pandemic compared to those without a diagnosis, while among those with a psychiatric diagnosis, those not receiving treatment were more affected than those using treatment.

Keywords: Anxiety, COVID-19, depression, psychiatric diagnosis, impact

Introduction

Emerging in China, the 2019 coronavirus disease (COVID-19) pandemic forms a global health threat [1]. It is very infectious and potentially deadly [2]. The COVID-19 infection is accepted as the largest atypical pneumonia epidemic to date since the severe acute respiratory syndrome (SARS) emerging in 2003. Since the start, it has affected greater numbers of the population than epidemics caused by SARS or similar diseases in terms of total case and death rates [3]. Isolation, quarantine, and limiting social interaction are the main prevention strategies recommended to reduce exposure to the pathogen as there is no treatment or vaccination for COVID-19 [4].

The COVID-19 pandemic has had a sudden and large effect

on health infrastructure, transport, daily activities, freedom of movement, and global distribution of medical resources [5-7]. Sudden changes may significantly impact the mental health of psychiatric patients and reduce access to psychiatric wards [8]. In this period, health services primarily focus on COVID-19 and may involve mental health workers being assigned to care for COVID-19 cases [4]. Most stable psychiatric patients should receive treatment at home to reduce infection risk. Additionally, in the current pandemic, psychiatric services should not be neglected as much as possible.

Many researchers have investigated the psychological effects of epidemics on individuals and identified an intense and broad range of psychiatric morbidities [9]. In the COVID-19 pandemic, new

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psychiatric symptoms may emerge in people without psychiatric diseases or the status of those with previous psychiatric diseases may worsen [10]. Quarantine may cause different types of problems. It may cause feelings of fear, anger, anxiety, and panic, or worse boredom and loneliness or feelings of guilt. In a person with a previous psychiatric disorder, these problems may emerge again severely and may cause post-traumatic stress disorder (PTSD) or even suicidal ideation or attempts. Anxiety may be so overwhelming that it may accelerate paranoia and nihilistic delusions [11]. Cases with bipolar disorder and schizophrenia may experience relapses due to the availability of normal medication and irregularity in medication compliance. Cases with substance use disorders may experience severe deprivation symptoms, delirium, or seizures which may be deadly due to the inability to find the substance or medications for a period [12].

Though studies have been performed on the effect of the COVID-19 pandemic on mental health among the general population [13], COVID-19 cases [14], health employees [15], and workers [16], there is little research about the effects on mental health of psychiatric patients. This study aimed to compare the sudden stress and psychological impact of the COVID-19 pandemic on people with and without psychiatric diagnoses. We assume that the anxiety, depression, and psychological impact levels of those with psychiatric disease will be higher than those without diagnosis during the pandemic. Additionally, we think that individuals with a psychiatric disease history not currently receiving psychiatric support (psychopharmacology, psychotherapy, etc.) will be more affected than patients receiving psychiatric support. It is considered that factors determining the impact levels in all groups will be sex, material status, presence of chronic disease, COVID history (neighbor, relative), number of people in the house, and place of residence (rural-urban). Our results have the potential to reveal the impact levels of the pandemic in terms of the mental health of people with and without psychiatric disease and will assist in planning and developing mental health services for possible new infectious disease epidemics.

Material and Methods

Participants, inclusion, and exclusion criteria

Our study received permission from Ordu University Faculty of Medicine Ethics Committee. All participants were informed in writing and signed a consent form. Psychiatric interviews were held with all participants with a diagnosis according to the Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5) by a psychiatrist and the Hamilton Anxiety Rating Scale (HAM-A), Hamilton Depression Rating Scale (HAM-D), Impact of the Event Scale-Revised (IES-R) and data form about sociodemographic features were used. During psychiatric interviews, necessary measures were taken to prevent transmission, especially physical distance.

Study group

This research is a case-control study. This case-control study included patients aged 18-60 years attending Ordu University Education and Research Hospital Psychiatric clinic from 01.05.2020–01.06.2020 who volunteered to participate in the study. After excluding 6 cases with psychotic symptoms, 3 cases meeting manic attack criteria, 4 cases with active suicidal ideation and 4 cases in mourning (6, 3, 4, 4 cases, respectively), and 22 cases who did not wish to complete the scales, the study included 182 cases and 183 healthy controls.

Inclusion criteria for cases with psychiatric diagnoses and health controls were different. In the case group, previous or current psychiatric diagnoses according to the Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5) of schizophrenia, bipolar I-II disorder, depression and anxiety disorders, obsessive-compulsive disorder, and others (food and eating disorder, sleep-insomnia disorders, etc.) were included. For healthy controls, people with no history of psychiatric disease were chosen. For both groups, illiterate people did not have the cognitive capacity to complete the scales (dementia, mental retardation, etc.), those with COVID suspicion or disease, and those serving as active health workers were excluded from the study.

Measures

A semi-structured sociodemographic data form included questions about the participant's age, sex, marital status, educational level, employment status, income level, place of residence, psychiatric disease history and treatment status, chronic disease history (cardiovascular, pulmonary, endocrine, inflammatory), number of people lived with, smoking and relatives or close friends with COVID disease or suspicion.

The Hamilton Anxiety Rating Scale (HAM-A) is a semi-structured scale developed by Hamilton to determine the severity of anxiety neuroses in 1959 [17]. It comprises 14 items assessing physical and psychic symptoms of anxiety. Points of 0-5 are assessed as no anxiety, 6-14 points are minor anxiety and 15 points and above are major anxiety. Yazıcı et al. completed the Turkish validity and reliability studies [18].

The Hamilton Depression Rating Scale (HAM-D) is commonly used to measure the degree of depression. It was developed by Hamilton in 1960 [19]. It comprises 17 items assessing symptoms of depression in the previous week. Points of 0-7 indicate no depression, 8-15 points indicate mild degree of depression, points of 16-28 indicate moderate degree of depression, and points of 29 and above indicate severe degree of depression. The validity and reliability studies for the Turkish form of the scale were completed by Akdemir et al. [20].

The Impact of the Event Scale-Revised (IES-R) was used to measure the psychological impact of COVID-19 [21]. The IES-R measures posttraumatic stress disorder symptoms in

survivors after an event. Points of 0-23 are normal, 24-32 indicate mild psychological impact, points of 33-36 are moderate psychological impact and points of 37 and above are assessed as severe psychological impact [22]. High validity and reliability levels were reported for the Turkish form of the scale [23].

Statistical analysis

Statistical analysis used the Statistical Package for Social Science (SPSS) 22.0. The Kolmogorov-Smirnov test was used to research the fit of variables to normal distribution. To identify the correlation with the dependent variable for continuous data, the Mann-Whitney U and Kruskal Wallis H tests were used as variables did not abide by normal distribution [HamA Statistic=.229, df=365, $p=.00$; HamD Statistic=.136, df=365, $p=.00$; IESR Statistic=.127, df=365, $p=.00$], while the chi-square test was used for categoric data and predicted relative risk (Odds ratio) was calculated. Linear regression analysis was performed to measure the effect on the scale score of variables with statistical differences identified. For all analyses, the statistical significance level was accepted as $p<0.05$. As a result of the analysis, no multi-linearity problem was found among all variables.

Results

Sociodemographic characteristics of the sample

The study included 365 participants, with 182 cases (with psychiatric disease) and 183 healthy controls. Of participants 220 were female (60.3%) and 145 were male (39.7%). The mean age in the case group was 39.58 ± 11.30 years, with a mean age in the healthy control group of 38.45 ± 11.75 years. Among participants with previous psychiatric disease history, there were 67 participants (18.3%) who were not currently using treatment (in other words 36.8% of the case group). When independent variables in the case and control groups are compared with the chi-square test, apart from relatives with COVID (+), groups had similar features. Descriptive data related to the case and control groups are given in Table 1.

Comparison of scale scores with independent variables

Mann-Whitney U and Kruskal-Wallis H tests were used for this analysis. The effect of the independent variables on the dependent variable in the study group was compared with the scale scores. The HAM-A scale score showed significant differences between the people in the study groups in situations with psychiatric disease history, presence of chronic diseases, number of people in the house, and smoking habit. The HAM-D scale score showed significant differences between the groups in terms of psychiatric disease history, chronic disease and number of people lived with. The IES-R scale score showed significant differences between the groups in terms of psychiatric disease history, chronic disease status, smoking habit, income level, and COVID history among relatives. Results are shown in Table 2.

Comparison of the scale scores of the case and control groups

Mann-Whitney U and Kruskal-Wallis H tests were used for this analysis. During quarantine precautions during the COVID-19 pandemic, people with psychiatric disease were identified to have higher depression, anxiety, and psychological impact levels (HAM-A, HAM-D, and IES-R score) compared to the control group ($p<0.05$). Within the case group, when grouped according to those receiving current treatment or not, when these two groups were compared with the control group, depression, anxiety, and psychological impact levels (HAM-A, HAM-D, and IES-R scores) were identified to be statistically significantly higher compared to the control group ($p<0.05$). Results are presented in Table 3. When the three groups were analyzed to determine which group caused the difference in HAM-A, HAM-D, and IES-R scores, it was identified that the impact level on every group was significantly different from the others. Accordingly, on all scales, the patient group with psychiatric history but no current treatment had significantly higher scores compared to the case group currently receiving treatment and the healthy control group, while the case group using treatment was identified to be significantly higher for all scales compared to the healthy controls ($p<0.00$).

Comparison of categorical classification of scale scores in case and control groups

HAM-A scale scores classify a cut-off of >5 points as a categorical absence/presence of anxiety. According to the HAM-A scale, 151 people in the case group had anxiety and 31 people did not; in the control group 82 people had anxiety, and 101 people did not have anxiety. Accordingly, the presence of anxiety during the quarantine period was identified to be 6 times greater in the case group compared to the control group (Table 4). The HAM-D scale score has a cut-off of >7 points for categoric no depression/depression classification. According to the HAM-D scale, 114 people in the case group had depression and 68 people did not have depression; in the control group, 56 people had depression and 127 people did not have depression. Accordingly, the presence of depression in the quarantine period was identified to be 3.8 times higher in the case group compared to the control group (Table 4). The IES-R scale has cut-off points of >23 for categoric absence/presence of psychological impact classification. According to the IES-R scale, in the case group 53 people had psychological impact while 129 people did not; while in the control group, 12 people had psychological impact and 171 people did not. Accordingly, the presence of psychological impact in the quarantine period was identified to be 5.8 times higher in the case group compared to the control group (Table 4).

Linear regression analysis results for significant variables related to the scales

Variables that had a significant effect on HAM-A, HAM-D, and IES-R scores underwent linear regression analysis. For the

HAM-A score, living alone and having treatment significantly reduced the score, while chronic disease increased it and smoking had no effect [R²:0.232; Adj R²:0.223; F(4,360)=27.191 P=0.000]. In terms of the HAM-D score, living alone and receiving treatment significantly reduced the score, while the presence of chronic disease increased it [R²:0.195; Adj R²:0.188;

F(3,361)=29.179 P=0.000]. For the IES-R score, poor income status and not receiving treatment significantly reduced the score, while chronic disease and relative with COVID (+) increased the score and smoking did not affect it [R²:0.193; Adj R²:0.182; F(5,359)=17.183 P=0.000]. Results are shown in Table 5.

Table 1. Descriptive characteristics of participants

		Case group		Control group		Chi-square test	
		Number	Percentage (%)	Number	Percentage (%)	df/value	p
Sex	Female	110	60.4	110	60.1	x ² (1)=.004	.949
	Male	72	39.6	73	39.9		
Age	18-30 years	38	20.9	54	29.5	x ² (3):3.936	.268
	31-40 years	51	28.0	43	23.5		
	41-50 years	55	30.2	48	26.2		
	51-60 years	38	20.9	38	20.8		
Marital status	Single	45	24.7	44	24.0	x ² (2)=.740	.963
	Married	119	65.4	122	66.7		
	Widowed	18	9.9	17	9.3		
Education	Primary school	25	13.7	27	14.8	x ² (1)=.822	.364
	Middle school	57	31.3	41	22.4		
	High school	68	37.4	79	43.2		
	Undergraduate	32	17.6	36	19.7		
Place of residence	Rural	66	36.3	65	33.5	x ² (1)=.022	.882
	Urban	116	63.7	118	66.5		
Number of people at home	Alone	19	10.4	21	11.5	x ² (2)=.523	.770
	Total 3 people	101	55.5	106	57.9		
	More than 3 people	62	34.1	56	30.6		
Employment	Unemployed	82	45.1	78	42.6	x ² (2):2.814	.245
	Employed	92	50.5	89	48.6		
	Student	8	4.4	16	8.7		
Psychiatric disease history	History (+) treatment (-)	67	36.8	-	-	-	-
	History (+) treatment(+)	115	63.2	-	-		
Diagnosis	MDD-AD	86	47.3	-	-	-	-
	OCD	29	15.9	-	-		
	Schizophrenia	24	13.2	-	-		
	BAD	22	12.1	-	-		
	Other	21	11.5	-	-		
Chronic disease	Absent	146	80.2	146	79.8	x ² (1)=.011	0.917
	Present	36	19.8	37	20.2		
Smoking habit	No	115	63.2	131	71.6	x ² (1)=2.929	0.087
	Yes	67	36.8	52	28.4		
COVID-19	No	172	94.5	161	88.0	x ² (1)=4.861	0.027
	Yes	10	5.5	22	12.0		
Total		182	100.0	183	100.0		

MDD: major depressive disorder, AD: anxiety disorder, OCD: obsessive compulsive disorder, BAD: bipolar affective disorder

Table 2. Comparison of scale scores with independent variables in the study group

		HAM-A		HAM-D		IES-R	
		Mean±SD	Test statistics	Mean±SD	Test statistics	Mean±SD	Test statistics
Sex	Female	6.55±2.10	p=.650* (U:15512 z:-.454)	7.74±3.13	p=.597* (U:15431 z:-.529)	16.98±6.84	p=.886* (U:15809 z:-.143)
	Male	6.45±2.06		7.66±3.42		17.19±7.64	
Age	18-30 years	6.52±2.11	p=.404** H (3)=2.919	7.24±2.98	p=.335** H (3)=3.395	16.72±6.52	p=.614** H (3)=1.802
	31-40 years	6.20±1.94		7.60±3.21		16.39±7.17	
	41-50 years	6.67±2.16		8.08±3.30		17.81±8.28	
	51-60 years	6.64±2.13		7.92±3.49		17.30±7.16	
Marital status	Single	6.42±2.15	p=.611** H (2)=.987	7.25±2.64	p=.611** H (2)=1.082	16.54±6.87	p=.508** H (2)=1.354
	Married	6.52±2.07		7.84±3.42		17.15±7.34	
	Widowed	6.63±2.07		8.00±3.35		17.77±6.78	
Education	Primary school	6.58±2.30	p=.956** H (3)=.322	8.17±3.19	p=.417** H (3)=2.841	17.71±7.15	p=.685** H (3)=1.490
	Middle school	6.41±2.13		7.84±3.32		16.29±6.75	
	High school	6.58±2.10		7.59±3.13		17.33±7.36	
	Undergraduate	6.44±1.84		7.44±3.45		17.12±7.39	
Place of residence	Rural	6.33±1.97	p=.468* (U:14642 z:-.725)	7.62±3.05	p=.997* (U:15323 z:-.004)	16.89±6.88	p=.886* (U:15189 z:-.143)
	Urban	6.61±2.15		7.77±3.36		17.16±7.33	
Number of people at home	Alone	5.73±2.11	p=.004** H (2)=11.1 Alone< (total 3 people=more than 3 people)	6.40±2.72	p=.010** H (2)=9.2 Alone< (total 3 people=more than 3 people)	15.95±6.14	p=.404** H (2)=1.813
	Total 3 people	6.59±1.90		7.74±3.18		17.00±7.34	
	More than 3 people	6.62±2.34		8.10±3.43		17.55±7.18	
Employment	Unemployed	6.48±2.05	p=.912** H (2)=.183	7.97±3.17	p=.180** H (2)=3.426	17.03±6.39	p=.412** H (2)=1.173
	Employed	6.54±2.08		7.60±3.37		17.30±7.90	
	Student	6.46±2.47		6.88±2.71		15.46±6.07	
Psychiatric disease history	History (+) treatment (-)	8.81±2.58	p=.000** H (2)=92.2 (H+T-)>(H+T+)>HC	10.63±3.54	p=.000** H (2)=67.9 (H+T-)>(H+T+)>HC	24.01±7.95	p=.000** H (2)=65.2 (H+T-)>(H+T+)>HC
	History (+) treatment(+)	6.60±1.84		7.97±3.18		16.63±7.14	
	Healthy control*	5.60±1.18		6.48±2.34		14.78±4.95	
Chronic disease	Absent	6.34±2.00	p=.002* (U:8189 z:-3.135)	7.40±3.02	p=.001* (U:8060 z:-3.241)	16.40±7.00	p=.000* (U:7539 z:-3.874)
	Present	7.19±2.29		8.96±3.80		19.71±7.23	
Smoking habit	No	6.44±2.02	p=.038* (U:12726 z:-2.071)	7.60±3.10	p=.114* (U:13154 z:-1.579)	16.76±6.95	p=.003* (U:11788 z:-3.019)
	Yes	7.19±2.55		8.91±4.35		20.22±8.59	
COVID-19	No	6.34±2.02	p=.129* (U:4482 z:-1.520)	7.54±3.21	p=.177* (U:4563 z:-1.350)	16.37±6.99	p=.029* (U:4087 z:-2.179)
	Yes	6.85±2.17		8.07±3.31		18.50±7.32	

*Mann-Whitney U test, **Kruskal-Wallis H, HAM-A: Hamilton anxiety rating scale, HAM-D: Hamilton depression rating scale, IES-R: impact of event scale-revised

Table 3. Comparison of HAM-A, HAM-D and IES-R scale points in case and control groups

	Case group	Control group	Test statistics	History (+) treatment (-)	History (+) treatment (+)	Control group	Test statistics
N	182	183		67	115	183	
	Mean±SD	Mean±SD		Mean±SD	Mean±SD	Mean±SD	
HAM-A	7.41±2.39	5.60±1.18	p=.00* (U:8697 z:-8.083)	8.81±2.58	6.60±1.84	5.60±1.18	p=.000** H (2)=92.2 (H+T-) > (H+T+) > HC
HAM-D	8.95±3.54	6.48±2.34	p=.00* (U:9779 z:-6.860)	10.63±3.54	7.97±3.18	6.48±2.34	p=.000** H (2)=67.9 (H+T-) > (H+T+) > HC
IES-R	19.35±8.24	14.78±4.95	p=.00* (U:11094 z:-5.524)	24.01±7.95	16.63±7.14	14.78±4.95	p=.000** H (2)=65.2 (H+T-) > (H+T+) > HC

*Mann-Whitney U test, **Kruskal- Wallis H, HAM-A: Hamilton anxiety rating scale, HAM-D: Hamilton depression rating scale, IES-R: impact of event scale-revised

Table 4. Comparison of categoric classification of HAM-A, HAM-D and IES-R scale points in case and control groups

		Case	Control	Odds ratio 95% CI	p
HAM-A	Anxiety present	151	82	5.9996 (3.6977-9.7346)	p<0.0001
	No anxiety	31	101		
HAM-D	Depression present	114	56	3.8020 (2.4614-5.8727)	p<0.0001
	No depression	68	127		
IES-R	Psychological impact	53	12	5.8547 (3.0049-11.4069)	p<0.0001
	No psychological impact	129	171		

HAM-A: Hamilton anxiety rating scale, HAM-D: Hamilton depression rating scale, IES-R: impact of event scale-revised

Table 5. Linear regression analysis results for significant variables related to scales

	B	Beta	95% CI for B	p-value	Collinearity statistics	
					Tolerance	VIF
HAM-A						
Living alone	-.728	-.109	(-1.341. -.116)	.020	.992	1.008
Chronic disease (+)	.781	.150	(.303. 1.258)	.001	.979	1.022
Smoking (+)	.343	.077	(-.063. .750)	.098	.973	1.028
History (+), treatment (+)	-1.773	-.425	(-2.153. -1.392)	.000	.995	1.005
HAM-D						
Living alone	-1.163	-.112	(-2.136. -.191)	.019	.992	1.008
Chronic disease (+)	1.456	.180	(.696. 2.215)	.000	.982	1.018
History (+), treatment (+)	-2.464	-.380	(-3.066. -1.892)	.000	.975	1.026
IES-R						
Chronic disease (+)	3.042	.170	(1.371. 4.714)	.000	.977	1.024
History (+), treatment (+)	-4.596	-.321	(-5.947. -.3245)	.000	.990	1.010
COVID(+)	4.274	.169	(1.898. 6.650)	.000	.983	1.017
Smoking	1.420	.093	(-.017. 2.856)	.053	.999	1.001

HAM-A: Hamilton anxiety rating scale, HAM-D: Hamilton depression rating scale, IES-R: impact of event scale-revised

Discussion

This study researched the anxiety, depression, and psychological impact levels of social isolation and quarantine during the COVID-19 pandemic on individuals with and without psychiatric disease in the Turkish population. The main outcome of the study is that cases with psychiatric diagnoses had significantly high points for HAM-A, HAM-D, and IES-R scores compared to the control group. When the case group is divided into two groups based on those currently receiving psychiatric treatment and those with a past psychiatric diagnosis but no current treatment, the group not using treatment was observed to receive higher points from the scales. The presence of chronic disease increased all scale points while living alone reduced the HAM-A and HAM-D scores. The IES-R scores were increased by a history of COVID (+) among relatives and reduced by poor income power. There were no differences between the scale scores in the groups according to age, sex, marital status, education, place of residence, and employment status. It can be said that the population is affected at similar rates from this aspect. When scales are categorized according to cut-off points and groups are compared, the case group was identified to have 6 times, 3.8 times, and 5.8 times higher anxiety, depression, and psychological impact levels, respectively, compared to the control group.

In our study, living alone was found to be correlated with a reduction in anxiety and depression scale points. Considering COVID-19 is very infectious and deadly [2], this result is thought to be related to people in our study group who lived alone during quarantine experiencing less anxiety about transmitting the virus and being infected themselves [11]. People have reported feelings like being infected and blaming themselves in epidemic periods [24].

A study in China by Qui et al. reported nearly 35% of people were psychologically impacted by the pandemic [25]. During the COVID-19 pandemic, research with 52370 valid participants across the country in China about psychological problems in the general population showed COVID-19 caused a variety of psychological problems like panic disorder, anxiety, and depression [1]. Additionally, it was reported that psychiatric patients had a high probability of impact from fear, anxiety, and depression caused by the COVID-19 pandemic and this may cause recurrence or disorder in present mental health status [26]. High anxiety and depression incidence in individuals with psychiatric disease history may be a finding associated with the recurrence of psychiatric disease, as shown in previous studies [27]. In our study, we identified the scale scores were highest in the psychiatric case group not currently receiving treatment. A meta-analysis reported the COVID-19 pandemic had the highest psychological impact on health workers among the general population and those with previous comorbid health situations (psychiatric disease, cancer, chronic disease) or among COVID-19 (+) cases generally. The most common markers of psychological impact were anxiety and depression and

prevalence was found to be 33% (28-38%) and 28% (23-32%). The same meta-analysis reported that those with preexisting health conditions or cases of COVID-19 had a significantly high degree of anxiety and depression prevalence compared to health employees, the general population, and healthy controls [28]. A study of 2065 people in a study of outpatient cases attending the psychiatry, neurology, and sleep medicine departments reported that 20.9% of (N=300) cases with previous psychiatric disorders (N=1.434) had worsened mental health status linked to the pandemic [29].

The answer to the question of whether psychiatric patients experience more psychiatric symptoms during the COVID-19 pandemic and quarantine was shown in a case-control study where cases with psychiatric diagnoses received higher points on the anxiety, depression, and IES-R scales compared to healthy controls. The same study found PTSD symptoms, depression, anxiety, stress, and insomnia levels were not associated with educational level, age, and sex and stated that this result showed that the pandemic negatively affects all sections of society [30]. In our study, we did not find an association between impact levels with sex, age, educational status, and place of residence.

The most important risk factors identified for mortality caused by COVID-19 are advanced age and comorbid chronic diseases [31]. Additionally, the risk of catching the disease increases for the elderly and people with chronic disease [32]. Studies have reported that chronic disease increases anxiety and depression during the COVID-19 pandemic [28]. In our study, we identified that the presence of chronic disease increased anxiety, depression, and psychological impact levels. Additionally, a study of individuals aged over 60 years found no statistically significant difference with the control group in terms of depression, anxiety, and health anxiety levels. This result was explained by the relatively high educational levels (14.85 ± 3.95) of participants having a possible protective effect against these symptoms [33].

A study of 343 people by Selçuk et al. found significantly high levels of depression and anxiety among those with COVID (+) friends or relatives [34]. In a study, the anxiety and depression levels of parents of children admitted to a hospital treating COVID-19 cases were higher than the levels of parents of children admitted to a hospital where COVID-19 cases were not treated [35]. In our study, we found no significant difference between the groups for depression and anxiety scores of those with friends or relatives with COVID (+) history. We identified the IES-R scores were significantly increased in those with COVID (+) history.

A recent study compared individuals under quarantine with individuals not under quarantine in the general population and found no correlation between quarantine with the prevalence of mental health problems. The study questioned anxiety, depression, and general psychological symptoms and showed a positive correlation between scale scores and their effect on daily life, but no effect from quarantine. They stated that the findings were extraordinary but were not unique [36].

Limitations

Our study has some limitations. The patient population in our study may not reflect the general psychiatric patient population due to the decrease in hospital admissions due to restrictions and quarantine. Therefore, the findings should be interpreted with caution. However, the social and cultural opportunities of different cities and local measures taken may also have affected the findings. Another limitation; Although it was conducted during the quarantine and restraint period, it is difficult to say that the results of our study are directly related to the pandemic.

Conclusion

New limitations on daily life and social activities within an unknown process will cause a population to suffer from stress and worry and as a result, confidence may be lost among survivors and the mental health of the society negatively affected [37]. In the recent literature, it is possible to come across studies suggesting that timely handling of mental health burdens by using simple, self-administered screening tools will prevent dire consequences in the future [38]. The most recent studies on adolescents in the literature were reviewed and it was found that 20% of the adolescents experienced psychological trauma symptoms during the COVID-19 epidemic; It was emphasized that there is a critical need to provide mental health services such as school-based services to adolescents to reduce the long-term negative psychological impact of the pandemic [39]. In our opinion, mental health services may need to be strengthened to alleviate the long-term effects. This is a case-control study that compared psychiatric symptoms between people with and without psychiatric illnesses during the COVID-19 pandemic. The results of this study suggest that psychiatric patients were at a higher risk of displaying higher levels of symptoms of depression, anxiety, and stress as compared to healthy controls. It was observed that patients who did not use treatment were at more risk than those using treatment. The rapid transmission and mortality risk of COVID-19 infection may increase the risk of mental health problems among healthy individuals in the general population and worsen preexisting psychiatric diseases. Fear of possible infection, quarantine in hospitals and at home, and social isolation may trigger many difficult emotions in individuals including panic, anxiety, and depression. The COVID-19 pandemic has caused physical, mental, and psychological harm to people around the world. Paying special attention to the mental health of the general population and those with psychiatric diseases will assist in planning and development for mental health services in a possible new infectious disease epidemic.

Conflict of Interests

The authors declare that there is no conflict of interest in the study.

Financial Disclosure

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Ethical Approval

This study was approved by the Ordu University Faculty of Medicine Ethics Committee, dated 30.04.2020 and numbered 09/80.

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